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To:	Examiner: Donghai D. Nguyen Group Art Unit: 3729 **Mail Stop:** Appeal Brief-Patents
Company Name:	USPTO
Fax Number:	571-273-8300
From:	Walter C. Pledger
Date:	January 21, 2009
Re:	Application Serial No. 10/517,445 Toshihiro **NISHII et al.**

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1. Patent Office Fee Transmittal Form (1 page)
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January 21, 2009
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	:	**Confirmation No. 8623**
Toshihiro NISHII et al.	:	Attorney Docket No. 2004_1930A
Serial No. 10/517,445	:	Group Art Unit 3729
Filed December 9, 2004	:	Examiner Donghai D. Nguyen
METHOD OF MANUFACTURING CIRCUIT FORMING BOARD	:	**Mail Stop APPEAL BRIEF-PATENTS**

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Sir:

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The Commissioner is authorized to charge any deficiency or to credit any overpayment associated with this communication to Deposit Account No. 23-0975, with the EXCEPTION of deficiencies in fees for multiple dependent claims in new applications.

Respectfully submitted,

Toshihiro NISHII et al.

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January 21, 2009

2004_1930A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of	:	**Confirmation No. 8623**
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APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

THE COMMISSIONER IS AUTHORIZED TO CHARGE ANY DEFICIENCY IN THE FEES FOR THIS PAPER TO DEPOSIT ACCOUNT NO. 23-0975

Sir:

The following is Appellants' Brief, submitted in accordance with the provisions of 37 CFR 41.37. Pursuant to the provisions of 37 CFR 41.20, this Brief is submitted with a fee of $540.00.

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REAL PARTY IN INTEREST

The real party in interest is PANASONIC CORPORATION, the assignee of record.

RELATED APPEALS AND INTERFERENCES

There are no known related appeals or interferences.

STATUS OF CLAIMS

Claims 1-16 have been cancelled.

Claims 17-28 stand rejected.

The Appellants now appeal the rejection of claims 17-28.

STATUS OF AMENDMENTS

No amendments subsequent to the Office Action of September 5, 2008 have been made.

SUMMARY OF THE CLAIMED SUBJECT MATTER

A description of the subject matter of the rejected claims is presented below with reference to the written description and drawings of this application. It is noted that the following description is made with reference to the specification as originally filed.

The subject matter of independent claim 17 is directed to a method of manufacturing a circuit forming board. The method includes impregnating an elongated reinforcing member 1 with impregnation material 2, with the reinforcing member 1 extending in a first direction 102 (see page 6, lines 20-22; page 7, lines 1-2; and Fig. 1). The method of claim 17 also includes transferring the reinforcing member 1 in a second direction 101 such that the first direction 102 of the reinforcing member 1 is parallel to the second direction 101 (see page 7, lines 1-3; and Fig. 1). The impregnating of the elongated reinforcing member 1 with impregnation material 2 occurs simultaneously with the transferring of the reinforcing member 1 in the second direction 101 (see page 7, lines 1-3; and Fig. 1).

The method of claim 17 also includes adhering films 4 directly onto an upper surface and

a lower surface, respectively, of the reinforcing member 3 so as to be entirely peelable off of the upper and lower surfaces of the reinforcing member 3 (see page 7, lines 16-17; page 8, line 27 through page 9, line 3; and Figs. 3-4 (it is noted that the reference numeral 3 corresponds to the reinforcing member 1 which has been impregnated with the impregnation material 2)). Further, the method of claim 17 includes transferring the reinforcing member 3 in a third direction 104 orthogonal to the first direction 102 of the reinforcing member 1 (see page 7, line 17 through page 8, line 2; and Figs. 3 and 4). The adhering of the films 4 directly onto the upper surface and the lower surface, respectively, of the reinforcing member 3 occurs simultaneously with the transferring of the reinforcing member 3 in the third direction 104 orthogonal to the first direction 102 of the reinforcing member 1 (see page 7, lines 17-19; and Figs. 3-4).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 17-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Tsujimoto et al. (US 7,063,768).

ARGUMENT

I. Rejection under 35 U.S.C. § 103(a) over Applicant Admitted Prior Art (hereinafter "AAPA") in view of Tsujimoto et al. (US 7,063,768) (hereinafter "Tsujimoto")

Claims 17-28

Independent claim 17 recites a method of manufacturing a circuit forming board, which includes impregnating an elongated reinforcing member with impregnation material, with the reinforcing member extending in a first direction, and transferring the reinforcing member in a second direction such that the first direction of the reinforcing member is parallel to the second direction. Claim 17 also recites that the impregnating of the elongated reinforcing member with impregnation material occurs simultaneously with the transferring of the reinforcing member in the second direction. In addition, the method of claim 17 includes *adhering films directly onto an upper surface and a lower surface, respectively, of the reinforcing member so as to be*

entirely peelable off of the upper and lower surfaces of the reinforcing member, and transferring the reinforcing member in a third direction orthogonal to the first direction of the reinforcing member. Claim 17 also recites that the adhering of the films directly onto the upper surface and the lower surface, respectively, of the reinforcing member occurs simultaneously with the transferring of the reinforcing member in the third direction orthogonal to the first direction of the reinforcing member.

The Applicants' Admitted Prior Art (AAPA), as shown in Figs. 6 and 7 of the present application, discloses a glass cloth 11 having a side extending in a first direction 202 and being moved in a direction 201 parallel to the first direction 202 (see page 1, lines 14-27 of the present application; and Fig. 6 of the present application). Films 14 are then applied to the sheet as the sheet is moved in the direction 201 parallel to the first direction 202 (see page 2, lines 3-8 of the present application; and Fig. 7 of the present application). Thus, as noted by the Examiner in the Office Action of September 5, 2008, the AAPA does not disclose transferring the reinforcing member in a third direction orthogonal to the first direction of the reinforcing member, as required by independent claim 17 (see Office Action at page 3). In this regard, because the AAPA does not disclose transferring the reinforcing member in a third direction orthogonal to the first direction, the AAPA also does not disclose that the adhering of the films directly onto the upper surface and the lower surface, respectively, of the reinforcing member occurs simultaneously with the transferring of the reinforcing member in the third direction orthogonal to the first direction of the reinforcing member, as required by independent claim 17.

Tsujimoto discloses a method for producing a laminated composite which includes supplying a core material C in a longitudinal direction, and bonding a longitudinal sheet S1 to the core material C by thermocompression bonding to form an intermediate lamination which is cut into pieces L1 (see column 49, lines 20-28; column 50, lines 41-51; and Figs. 21-22). Further, Tsujimoto discloses that the cut pieces L1 are then transferred in a direction perpendicular to the longitudinal direction (see column 49, lines 30-32; and Fig. 21) or are rotated 90° and continue to be transferred in the longitudinal direction (see column 50, lines 51-53; and Fig. 22). Tsujimoto also discloses bonding a lateral sheet S2 to the pieces L1 to form a final lamination L2 (see column 49, lines 32-39; column 50, lines 53-59; and Figs. 21-22).

In the Office Action of September 5, 2008, the Examiner indicates that the transferring of the core material C in the direction perpendicular to the longitudinal direction shown in Fig. 21 of Tsujimoto corresponds to the transferring of the reinforcing member in a third direction orthogonal to the first direction of the reinforcing member, as required by independent claim 17 (see Office Action at page 3). Further, the Examiner cites column 19, lines 22-23, or column 37, line 34 of Tsujimoto as disclosing that that the transferring of the core material C in the direction perpendicular to the longitudinal direction shown in Fig. 21 while applying the sheets results in "good thickness precision" (see Office Action at page 3). Therefore, the Examiner asserts that it would have been obvious to one of ordinary skill in the art to modify the AAPA by utilizing the transferring of the pieces L1 in a direction orthogonal to the first direction to obtain a circuit board having good thickness precision (see Office Action at page 3).

It is noted that MPEP § 2143 states that "The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious." Further, MPEP § 2143 states that the articulated reasoning must have "some rational underpinning to support the legal conclusion of obviousness."

As indicated above, the Examiner has articulated that the invention of claim 17 would have been obvious over AAPA in view of Tsujimoto because Tsujimoto discloses that the transferring of the core material C in the direction perpendicular to the longitudinal direction shown in Fig. 21 while applying the sheets results in "good thickness precision" (see Office Action at page 3).

In this regard, it is noted that Tsujimoto does not disclose that the transferring of the core material C in the direction perpendicular to the longitudinal direction results in a good thickness precision, as asserted by the Examiner. Rather, at column 19, lines 17-24 (which includes the portion cited by the Examiner on page 3 of the Office Action), Tsujimoto states:

> Thus, in the present invention, the pressure is not controlled but displacement in the range of the compressive elasticity area is changed, thereby performing the above-mentioned compression. According to this method, even if the heating temperature of the thickness of the foamed body sheet changes, a laminated composite having a good thickness precision can be obtained.

In addition, at column 37, lines 31-36 (which includes the portion cited by the Examiner

on page 3 of the Office Action), Tsujimoto states:

> [T]he pressing quantity is controlled by the compressive strain quantity of the foamed body sheets; therefore, even if the heating temperature changes, laminated composites having a uniform thickness can be produced[.]

Thus, Tsujimoto clearly states that the thickness precision of the laminate structure is obtained by changing the displacement in the range of the compressive elasticity area, or by controlling the compressive strain quantity. Tsujimoto does not disclose or even suggest that the transferring of the core material C in the direction perpendicular to the longitudinal direction results in a good thickness precision, as asserted by the Examiner. Therefore, it is respectfully submitted that the Examiner has not articulated a reasoning having some rational underpinning in order to support the conclusion of obviousness based on AAPA and Tsujimoto.

Further, it is noted that Tsujimoto is directed to a method of producing a laminated composite which is used as a civil engineering and construction material, and in particular, as a tatami mat core material for the floor of a house (see column 1, lines 6-10). The sheets S1 and S2 serve as the face material on the surface of the core material, as shown in Fig. 4. As stated in column 2, lines 50-58, Tsujimoto discloses that the face material is composed of the longitudinal sheets S1 and the lateral sheets S2 in an orthogonal form with respect to each other in order to cancel anisotropy in the longitudinal and lateral directions.

Thus, as shown in Figs. 21 and 22, Tsujimoto discloses bonding a longitudinal sheet S1 on an upper surface of the core material C, transferring the resulting pieces L1 in a direction perpendicular to the longitudinal direction (*i.e.*, top to bottom in Fig. 21), and then bonding a lateral sheet S2 on the longitudinal sheet S1 (*i.e.*, indirectly on the upper surface of the core material C). In other words, Tsujimoto discloses bonding a sheet S1 onto the upper surface of the core material C, transferring the core material in a direction perpendicular to the longitudinal direction, and then indirectly bonding a second sheet (S2) onto the upper surface of the core material. Thus, Tsujimoto does not disclose that the transferring the reinforcing member in a third direction orthogonal to the first direction occurs simultaneously with adhering films directly onto an upper surface and a lower surface, respectively, of the reinforcing member, as required by independent claim 17.

II. Conclusion

For the reasons presented above, it is believed apparent that the present invention as recited in independent claim 17 is not disclosed or suggested by the AAPA and the Tsujimoto reference taken either individually or in combination. Accordingly, a person having ordinary skill in the art would clearly not have modified the AAPA in view of the Tsujimoto reference in such a manner as to result in or otherwise render obvious the present invention of independent claim 17. Claims 18-28 depend from claim 17 and are therefore considered patentable at least by virtue of their dependency.

In view of the foregoing, Appellants respectfully request that the Examiner's decision to reject claims 17-28 be reversed.

This brief is submitted with the requisite fee of $540.00. **The Commissioner is authorized to charge any deficiency or to credit any overpayment of fees associated with this communication to Deposit Account No. 23-0975.**

Respectfully submitted,

Toshihiro NISHII et al.

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Claims Appendix

17. A method of manufacturing a circuit forming board, comprising:

impregnating an elongated reinforcing member with impregnation material, the reinforcing member extending in a first direction;

transferring the reinforcing member in a second direction such that the first direction of the reinforcing member is parallel to the second direction,

wherein said impregnating of the elongated reinforcing member with impregnation material occurs simultaneously with said transferring of the reinforcing member in the second direction;

adhering films directly onto an upper surface and a lower surface, respectively, of the reinforcing member so as to be entirely peelable off of the upper and lower surfaces of the reinforcing member; and

transferring the reinforcing member in a third direction orthogonal to the first direction of the reinforcing member,

wherein said adhering of the films directly onto the upper surface and the lower surface, respectively, of the reinforcing member occurs simultaneously with said transferring of the reinforcing member in the third direction orthogonal to the first direction of the reinforcing member.

18. The method as defined in claim 17, wherein said adhering of the films comprises pressing the films onto the upper surface and the lower surface, respectively, of the reinforcing member with a heated roller.

19. The method as defined in claim 17, wherein the reinforcing member comprises woven fabric.

20. The method as defined in claim 17, further comprising:

forming a via-hole in the reinforcing member and the films adhered on the upper surface and the lower surface of the reinforcing member;

filling the via-hole with conductive paste;

peeling off the films from the reinforcing member; and

heating and pressing metallic foils onto the upper surface and the lower surface, respectively, of the reinforcing member after said peeling off of the films.

21. The method as defined in claim 17, wherein the reinforcing member has a rectangular shape having a long-side direction and a short-side direction, and the long-side direction is orthogonal to the first direction of the reinforcing member.

22. The method as defined in claim 17, wherein the reinforcing member has a side which extends in the first direction.

23. The method as defined in claim 17, wherein said transferring of the reinforcing member in the second direction includes transferring each of a plurality of separate reinforcing member segments in the second direction, each of the plurality of reinforcing member segments

extending in the first direction,

wherein said adhering of the films directly onto the upper surface and the lower surface, respectively, of the reinforcing member comprises adhering films onto an upper surface and a lower surface, respectively, of each of the plurality of separate reinforcing member segments, and

wherein said transferring of the reinforcing member in the third direction comprises transferring each of the plurality of separate reinforcing member segments in the third direction.

24. The method as defined in claim 23, wherein said adhering of the films comprises adhering continuous films onto the upper surface and the lower surface, respectively, of each of the plurality of separate reinforcing member segments.

25. The method as defined in claim 23, wherein said impregnating of the elongated reinforcing member with impregnation material comprises impregnating a fiber sheet with a resin, the method further comprising:

squeezing a part of the impregnated resin such that the impregnated resin is in a semi-cured state after said squeezing of the part of the impregnated resin,

wherein said squeezing of the part of the impregnated resin occurs simultaneously with said transferring of the reinforcing member in the second direction; and

cutting the fiber sheet into the plurality of separate reinforcing member segments after the impregnated resin is in the semi-cured state.

26. The method as defined in claim 17, wherein the reinforcing member is a prepreg

sheet.

27. The method as defined in claim 17, wherein the reinforcing member comprises a fiber sheet, and wherein said impregnating of the elongated reinforcing member with impregnation material comprises impregnating the fiber sheet with a resin, the method further comprising:

squeezing a part of the impregnated resin,

wherein said squeezing of the part of the impregnated resin occurs simultaneously with said transferring of the reinforcing member in the second direction, and

wherein the impregnated resin is in a semi-cured state after said squeezing of the part of the impregnated resin.

28. The method as defined in claim 17, wherein the reinforcing member comprises a fiber sheet, and wherein said impregnating of the elongated reinforcing member with impregnation material comprises impregnating the fiber sheet with a resin, the method further comprising:

squeezing a part of the impregnated resin, wherein the impregnated resin is in a semi-cured state after said squeezing of the part of the impregnated resin, and wherein said squeezing of the part of the impregnated resin occurs simultaneously with said transferring of the reinforcing member in the second direction; and

cutting the fiber sheet into a plurality of separate reinforcing members after the impregnated resin is in the semi-cured state.

Evidence Appendix

None.

Related Proceedings Appendix

None.